Reinvisioning and redesigning "a library for the fifteenth through twenty-first centuries": a case study on loss of space from the Library and Center for Knowledge Management, University of California, San Francisco*

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The University of California, San Francisco, is an academic health sciences campus that is part of a state public university system. Space is very limited at this urban campus, and the library building's 90,000 square feet represent extremely valuable real estate. A planning process spanning several years initially proposed creating new teaching space utilizing 10,000 square feet of the library. A collaborative campus-wide planning process eventually resulted in the design of a new teaching and learning center that integrates clinical skills, simulation, and technology-enhanced education facilties on one entire floor of the building (21,000 square feet). The planning process resulted in a project that serves the entire campus and strengthens the library's role in the education mission. The full impact of the project is yet unknown as construction is not complete.

INTRODUCTION

Reports in the literature and surveys of students and faculty document the changing nature of library space, creating opportunities to design spaces that serve today's academic communities. Transforming library space contributes to relevancy in an academic environment and addresses ongoing questions about the value of library and library space. At the University of California, San Francisco (UCSF), the creation of a teaching and learning center (TLC) created an opportunity to design new space for existing library functions and to forge closer alliances with campus programs. The TLC emerged from several years of planning and collaboration to address critical space needs for expanding education programs and to fulfill new goals for telemedicine training in California. This process ultimately led to the realization of a multipurpose facility that integrates clinical skills, simulation, and technology-enhanced education facilities onto the second floor of the Parnassus campus library, optimizing the space into a state-of-the-art education and teaching facility.

BACKGROUND

UCSF is an academic health sciences campus that includes schools of dentistry, medicine, nursing, and pharmacy and 19 graduate programs. It is one of 10 research campuses in the California state university system. UCSF has 2,600 students and 18,600 staff and faculty. This urban campus is distributed in multiple locations, the 2 primary locations known as Parnassus and Mission Bay. Currently, the Parnassus campus includes clinical facilities and research labs and is the location of the majority of the classroom teaching. Mission Bay is primarily a basic science research campus, with some teaching and plans for hospitals within the next 5 years.

The UCSF Library and Center for Knowledge Management, located on the Parnassus campus, opened in 1990 and is the newest building on campus. Its attractive design is unique to this urban, utilitarian campus and serves as a showplace, with spectacular views, space for quiet reflection and study, and common ceremonial space for gatherings, as well as typical library functional space. Due to state-mandated space restrictions, the Parnassus campus has not been able to add a new building since 1990. The opening of the Mission Bay campus provided opportunities to expand labs and classrooms for graduate programs, but teaching space on the Parnassus campus is woefully inadequate in quantity and functionality for the demand. Changing curricula require multiple, small-group sessions, as well as space to practice individual and team skills with simulated patients and equipment.

THE PROJECT

Beginning in 2004, there were suggestions about rethinking the use of the UCSF library space, both as a way to address the increasing pressure for classrooms and the recognition that digitization could potentially open up library space. As a first step, the school of medicine commissioned the original library architect to explore repurposing the top two floors of the library into classrooms. These floors were prime campus real estate, with commanding views and a meeting room used heavily for campus-wide functions. These plans did not go beyond the early planning stages due to lack of funding and concerns expressed by many on campus. At the same time, the need for dedicated education space gradually became more serious with increasing class sizes for the school of nursing and changes in teaching from large lecture halls to small classrooms. Additionally, the emer-

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* The title of Cooper's 1991 paper, "A Library for the Fifteenth through the Twenty-first Centuries," in the *Bulletin of the Medical Library Association* [1].

gence of a campus strategic planning process provided an opportunity to consider the issues in a different framework. The strategic plan defined campus priorities for education, including (1) education of leaders in health care delivery and research and (2) interdisciplinary and interschool approaches in education [2]. The emphasis on strategic planning resulted in a series of committees charged by the provost/executive vice chancellor to advise him on library space issues.

The process for decision making at UCSF grows out of the concept of shared governance, which calls for wide consultation on academic matters. Thus, the library space planning process included representatives from all the schools, members of the UCSF Academic Senate Library Committee, and library staff, with the university librarian serving as committee chair.

In 2005, an advisory committee on library space planning—consisting of faculty, staff, students, and library and campus planning staff—was tasked with examining the implications of repurposing library space for new functions. This committee collected data about space utilization, reviewed the current distribution of space by function, compared the UCSF library to peer institutions, conducted a student survey, and analyzed other campus surveys that commented on library programs and space. These findings are summarized in the committee's recommendations that emphasized the idea of the library as common space for use by the entire campus. A key recommendation was that "New functions proposed for the Library should give preference to those that broaden existing programs and allow for new partnership and collaboration with library staff and programs" [3]. Outside consultants from the Association of Academic Health Sciences Libraries (AAHSL) community were also engaged to assist with evaluating library space needs and to report on best practices. Their report recommended that the library consider converting some space to educational purposes, while ensuring that "the assignment of new functions should be consistent with the Library's core purpose, make optimum use of educational technologies, maintain the security of library resources, and allow flexibility to evolve to meet changing institutional needs" [4].

In March 2006, a working group on library space planning was created to develop specific action items based on the earlier recommendations. The working group recommended repurposing 10,000 assignable square feet on the 2nd floor of the building, in space occupied by 117,000 bound journal volumes and study carrels.

While UCSF has reliably generated capital development and grant funds to support clinical care and research, funds for the education infrastructure have been a lower priority. New opportunities emerged in 2006 when California passed the Kindergarten–University Public Education Facilities Bond Act of 2006 (Proposition 1D) [5]. Proposition 1D included funding for the program in medical education for the five

University of California medical schools to support expanded patient care and clinical education to underserved populations in California. The program at UCSF, PRIME-US, targets urban, underserved populations by increasing medical student enrollment and training students in the use of telemedicine as a way to expand health care delivery to urban areas. UCSF's proposal was praised because it distributed the program to multiple teaching and clinical sites and included the repurposing of existing space, including the library. The other medical schools used their funds for new buildings. In addition, while PRIME-US is specifically a medical school program, UCSF envisioned an inclusive process in space and facilities design that would serve all professional school programs, including dentistry, nursing, and pharmacy.

Recommendations of the working group and its predecessor, the advisory committee on space planning, were consistent with the goals of the PRIME-US telemedicine program approved and funded by Proposition 1D. Following passage of the bond measure, a final planning group was convened in 2007 to develop priorities for using the space for new educational functions as recommended by the previous reports. In particular, they emphasized the recommendation from the consultants' report, "that innovative educational technologies be considered when planning changes to the library building, for their potential to enhance education services and spaces. Such technologies can help transform the library into a core education facility" [4]. This committee urged that the space design also support interprofessional education [6].

In late 2007, a formal planning process began to develop plans for a facility utilizing library space that met the needs of the PRIME-US telemedicine program and addressed campus needs for education space. Initial recommendations specified redesigning approximately 10,000 square feet of the library's second floor, about 40% of the entire floor or 10% of the entire library space, for use as educational space. The identified space was primarily occupied by bound journal stacks but included study space interspersed between the stacks and a staff office. A large reading room, a computer lab and classroom, a multimedia lab, copy and cashier services, interlibrary loan services, and staff offices for all of these services were also located on this floor. During the discussions, a decision was made to renovate the entire floor to create an optimal design for the library. The library's student computer lab and educational technology lab space would remain as part of the educational space but would be renovated as part of the overall project. The breakdown of space changes is shown in Table 1.

The second-floor student computing facilities were heavy-use areas, whereas use of the print collection in the stacks was declining, and consequently, copy services were also on the decline. The large reading room was not the most popular in the building but had several large tables positioned near windows

Table 1
University of California, San Francisco, library changes in assignable square feet (ASF)

	ASF before	ASF after	ASF changed	% change
Library occupied space in building	90,893	79,214	−12,952	−14.25%
Changes to 2nd floor				
Library stacks	9,191	0	−9,191	−100%
Study space	2,193	0	−2,193	−100%
Computer lab and multimedia lab	2,853	3,144	291	10%
Computer classroom	709	677	−32	−5%
Staff offices*	3,820	1,802	−2,018	−53%
Restrooms†	334	525	191	57%
Storage and loading dock	1,393	1,393	0	—
Total change	20,493	7,541	−12,952	−63%
New programs added to 2nd floor				
General assignment classrooms		3,716		
Clinical skills lab		3,869		
Simulation lab/telemedicine		2,055		
Corridors and other circulating space		3,175		
Total added		12,815		

* Some staff offices relocated to another floor. Public space repurposed into 529 square feet of office space.
† New restrooms are larger to accommodate increased traffic on this floor.

overlooking the Golden Gate Bridge and was in a quiet part of the building. This project offered an opportunity to reprioritize the space and dedicate space to higher impact programs and create an exciting, innovative education space.

PRACTICAL ASPECTS

Building projects are the responsibility of the UCSF Capital Projects and Facilities Management (CPFM) department. A CPFM project manager was assigned to manage time lines, funding, the approval process, and contractor bids and to work with designers, architects, and contractors. During the planning phase of the project, the library received funding for a half-time internal project manager to organize tasks and keep things moving. The library's head of collections was responsible for the collection move, and the head of education and public services managed the other areas of the project, working closely with the head of administration. The key staff met weekly with the campus project manager to share updates, exchange information, and plan details. This regular communication was crucial to the success of the project.

The library also served on committees that were driving this project. The library director served on the UCSF PRIME-Telemedicine Oversight Committee, which had been established to oversee all aspects of that project including the second floor of the library. The oversight committee reviewed and resolved issues that affected the overall scope, budget, and schedule. The library director and the associate dean of the school of medicine cochaired a task force consisting of representatives from each of the schools, program directors impacted by the project, the project manager, and campus planning. The library's head of education and public services also served on this task force. This group met monthly and was often called together to make group decisions regarding design and other issues.

The planning, design, and construction phases followed standard procedures for approvals and release of state funds. Consequently, work on the collection move could not begin until funds were available from the state, resulting in a compressed time line for that portion of the project. The library relied on the campus project manager to navigate this approval process and to stay informed of key dates.

While the primary focus was renovation of the library's 2nd floor, in actuality, every floor of the building was affected by the project. To move the 117,000 volumes from the 2nd floor, all parts of the collection needed to be touched. Prior to the move, the collection was split between floors based on date, with some specialized materials shelved separately. This project involved moving all 460,000 volumes in the building. Some specialized materials would be absorbed into the general collection, and all bound journals would be together on the 1st floor in compact, moveable shelving.

Many discussions over several months were necessary for the project manager to understand the complexities of moving the collection. A consultant in library collection moves was hired to provide guidance through the process and to supervise the work of experienced library movers.

In addition to the collection, the displacement of other services and offices on the second floor led to several shifts of space and people, some of which were positive. Listed here are the most significant changes.

Positive impacts on other library operations

■ Interlibrary services and copy/cashier units were relocated to remodeled office space in close proximity to other service points and related units.
■ The project provided the opportunity to repurpose a beautiful reading room into a more functional study area, restricted for use by UCSF students.

Negative impacts on other library operations

- A temporary computer lab space was created during year-long construction. The temporary space will be smaller and does not include a teaching space.
- Approximately 100 study seats were permanently lost.
- Remodeled offices displaced other public use spaces on main floor of library.
- A heavily used conference room has been temporarily lost.

CONCLUSION

The TLC project created new opportunities for the UCSF library, despite the challenging aspects of losing space. A successful planning process resulted in enduring partnerships and alignment of goals to support the education mission at UCSF and more strategic use of space occupied by journal volumes.

First, the library led an inclusive, consultative process in identifying new functions for library space and suitable locations for those functions. This process was endorsed by the provost and thus had support (and accolades for visionary library staff) from the chancellor. Significant time was allotted for planning, which enabled the development of a program for space that produced broad campus support. Concurrency with the campus strategic planning process provided context as well as insights into campus priorities. The UCSF strategic planning process was inclusive, involving faculty, staff, and students from all parts of the organization. Because there was considerable overlap in membership between the strategic planning and library space planning committees, one would expect to see common themes in the recommendations. The report from the AAHSL consultants offered an objective perspective from the peer community early in the process, and their recommendations reinforced the university librarian's and planning committees' preliminary proposals.

The library benefited from this project in several ways. The library's effective leadership strengthened partnerships with professional and graduate education leaders and demonstrated a collaborative vision. The project offered an opportunity to design new spaces for functions managed by the library, particularly outdated computer labs. The reconceptualization built on the library's leadership in instructional technology and introduced educational concepts, such as active learning and collaboration space, into the design process. The integration of library-supported activities with the classrooms and simulation labs positions the library to expand involvement in the academic programs. For the long-term, the new functions will require all professional school students to come into the library, and new and energizing spaces and programs will keep them there.

While the end result will create a stronger library presence, the process to build consensus was extremely time consuming. The majority of library staff contributed to the process. For staff whose offices were relocated to smaller space, it was an opportunity to redesign work areas with new furniture and equipment. The consolidation of the bound journals to a single floor has been well received. Anticipated problems with users having to use compact shelving have been minor to nonexistent. When the project is completed, we expect the increased use of the building to result in issues for public services staff, where they may encounter new questions about broader campus activities and services. Increased traffic and stairway use may lead to noise problems, but we believe it is possible to strike a balance between serving the educational needs of the campus and providing quiet study options for our students.

Reflecting back, it is useful to consider whether this project succeeded in achieving goals outlined in early recommendations. As we plan for contiguous learning spaces jointly managed by the library and other campus departments, we have already seen evidence that the new functions will broaden the library's existing programs and allow innovative partnership and collaboration as recommended by the 2005 advisory committee [3]. The library recognizes support for education as one of its core functions, and therefore the TLC is consistent with that mission [6].

We recognize the result of good design. It is space that inspires. It is space that reflects a community's vision of itself and that reinforces connections within, and among, communities. [7]

Continuing pressures on library space are inevitable. Libraries must have a compelling vision, strong campus advocates, and data to justify space allocations as more and more information is digital. Additionally, it is important to take part in strategic planning processes to understand where opportunities might exist to align goals with potential partners and to gather support for new initiatives. This project began at an optimal time, bringing together the need for space, a clear direction from the campus, and construction funding. The end result is new space that supports the strategic planning goals of education, innovation, and collaboration.

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